

**PROJECT PROFILE**  
**ON**  
**ACRYLIC BUTTONS**

**MONTH & YEAR**  
**JULY 2011**

**PREPARED BY**  
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# **ACRYLIC BUTTONS**

## **INTRODUCTION**

Plastic buttons are manufactured by basically two processes by 1) cutting acrylic and polyester sheets by die punching process and 2) by processing urea compression moulding. In the given profile details are given for setting up a project of acrylic sheets by dye punching machinery.

## **MARKET**

The plastics industry seems to be going through a major change as the processing units shift focus from traditional packaging to newer segments such as equipment manufacturing for automobiles, agriculture, poultry farming, agriculture and blown films.

The plastics product manufacturing and processing business, which employs over 3.6 million people directly in India, is considered as one of the most sought after industries among the entrepreneurs and start ups in India. The industry is growing at an annual rate of over 15 per cent and the emerging segments include agro-based as well as consumer based.

The proposed investment of Rs 1.5 lakh crore (\$37 billion) in upstream industry to set up 11 petrochemical complexes in India is expected to provide impetus for growth of polymer consumption to 15 million tonnes by 2015 according to Mr. Ashok Goel, President, Plastindia Foundation.

The Indian plastics industry, he said, has seen a consistent growth of over 15 per cent over the past five years, and the per-person consumption has doubled over the last four years to eight kg in 2010.

This is expected to increase to 10 kg by 2012 and to be on par with the global consumption, 27 kg, by 2020 because of the increasing consumption across sectors like packaging, infrastructure, agriculture, automotives, healthcare and FMCG.

In agriculture alone, around 17 million hectares are to be brought under drip irrigation according to the Union Ministry of Agriculture over the next three-four years. This leads to a tremendous potential for use of plastics in irrigation and plastic pipes, Mr. Goel said.

INDIA- one of the fastest growing economies of the world, is all set to attain the premier status along with China. India is a favoured destination for overseas investors and offers the advantages of an open economy, increasing liberalization, a stable democratic political scenario, highly skilled work force with fluency in English.

After liberalization of the economy in 1992, the Government of India has been quite supportive of industry in general, taking many steps over the years for the conducive growth of business. These measures favouring economic growth, are being continuously taken by the Indian Government, irrespective of the change in power. The Government of India is endeavoring to achieve GDP growth of more than 7% in the next 10 years. It is quite possible that plastics could grow at 14%, based on historical performance.

The Indian plastics industry, with more than 4 million tons consumption in 2003 is well spread all over India. While it is estimated to be fragmented across more than 30,000 processors, the large processors are less than 100. These 100 have about 35% share of the plastics processing industry.

The historical growth of the plastics industry over the last few decades is at an impressive 12-14%, which is twice the GDP growth. The major driver of this growth is the increased standard of living of people in India (housing the second largest population in the world). It is estimated that almost 35% of the 1.2 billion population has a purchasing power equivalent to that in European countries.

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With the growth in consumption, plastic production in India is likely to grow by 60 per cent to touch 12.75 million tonne by 2012, according to a industry body." Plastic is an integral part of our life and its consumption is growing every year. We are expecting the production to grow by 60 per cent in line with the consumption which will be around 12.75 million tonne by FY 12," according to All India Plastics Manufacturers' Association (AIPMA) .

At present, the plastic production as well as the consumption is about eight million tonne. The consumption has grown significantly over the last two decades and India is projected to be number three in plastic usage by 2015.

India's plastics processing sector will grow from 69,000 machines to 150,000 machines by the year 2020. India's demand for plastics in irrigation alone is pegged to cross 2.5 million tonnes by 2015. Indian automobile industry is growing at more than 18% p.a. and is hungry for plastics. The plastics processing industry is a source of great potential for global businesses. There is tremendous scope for innovative technological upgradations.

### **INSTALLED CAPACITY**

The installed capacity of proposed unit is 400 Gross of Buttons per day on single shift basis. The annual installed capacity works out to 120000 Gross buttons. One gross is equal to 12 Dozens (144 Nos)

### **QUALITY SPECIFICATIONS**

There is no Indian Standard Specification for Acrylic Buttons, but there is : 1461 - 1966 (Plastic buttons, thermosetting) and IS : 8543 (Part XIII/Sec.I) - 1977 for methods of testing thermosetting plastic buttons.

### **PLANT AND MACHINERY**

The following items of plant and machinery are required for the project.

| <b>Items</b>   | <b>Qty -<br/>Nos</b> | <b>Value Rs.</b> |
|--|----------------------|------------------|
| Sheet cutting machine with 0.5 HP machine              | 1                    | 63000            |
| Drilling machine 1 HP motor                            | 1                    | 29500            |
| Hole Maker ( drilling)                                 | 1                    | 22500            |
| Grinding machine                                       | 1                    | 15000            |
| Other equipments & hand operated & hand operated tools |                      | 20000            |
| <b>Total</b>   |                      | <b>150000</b>    |

## **MANUFACTURING PROCESS**

The acrylic sheets are purchased from the market and cut according to the sizes by using die punches. Grinding machines according to the desired shapes and design does final finishing. Designs are embossed over the buttons and then polishing is done. The buttons are packed in boxes and dispatched.

## **RAW MATERIALS**

The raw material required for the production at full capacity is given below

|                       |         |         |         |
|-----------------------|---------|---------|---------|
| For Quantity -Gross   | 120000  |         |         |
|                       | Qty-Nos | Rate-Rs | Value   |
| Acrylic sheets        | 26668   | 92.00   | 2453456 |
| Total                 |         |         | 2453456 |
| TOTAL for 120000      |         | Rs.     | 24.53   |
|                       |         | lakhs   |         |
| Packing material cost |         |         | 0.90    |

## **LOCATION LAND AND BUILDING**

The infrastructural facilities required for the project by way of land and buildings are the following.

|                       |       |
|-----------------------|-------|
| Built up area-Sq.ft   | 500   |
| Rent p.m.-Rs          | 5000  |
| Advance-10 months. Rs | 50000 |

## UTILITIES

### Power & water

|                       |                |      |
|-----------------------|----------------|------|
| Three phase           | KW             | 3.00 |
| Power charges         | Rs. lakhs p.a  | 0.40 |
| Water-For process     | Litres per day | 0    |
| For human consumption | ltr/day        | 200  |

## MANPOWER

The manpower requirement for the project is given below

|                                  | <b>Nos</b> | <b>Monthly wages</b> | <b>Total</b> |
|----------------------------------|------------|----------------------|--------------|
| Supervisor                       | 1          | 9000                 | 9000         |
| Skilled                          | 2          | 7000                 | 14000        |
| Helpers                          | 2          | 5000                 | 10000        |
| sub total                        |            |                      | 33000        |
| Add benefits                     |            | 20%                  | 6600         |
| Total per month                  |            |                      | 39600        |
| <b>TOTAL PER ANNUM-Rs. lakhs</b> |            |                      | <b>4.75</b>  |

## SCHEDULE OF IMPLEMENTATION

If the financing arrangements are finalized the project can be implemented in three months time.

## **COST OF PRODUCTION AND PROFITABILITY**

### **Assumptions**

|   |  |
|---|--|
| Installed capacity                          | 120000 Gross Acrylic sheet buttons per annum       |
| Capacity utilisation                        | Year-1 -60%<br>Year -2 -70%<br>Year-3 onwards- 80% |
| Selling price                               | Rs.33.00 per Gross.                                |
| Raw materials                               | As per the details given above                     |
| Packing materials                           | Rs.0.54 lakh per annum.                            |
| Power                                       | Rs.0.24 lakh per annum at 100%                     |
| Wages and salaries                          | Rs. 4.75 lakhs with increase 5% every year.        |
| Repairs and Maintenance                     | Rs.0.30 lakh per annum                             |
| Depreciation                                | Written down value method -15 % on machinery       |
| Selling general and administrative expenses | Rs.6000 per month                                  |
| Interest on Term loan                       | 14% per annum                                      |
| Interest on working capital                 | 14% per annum                                      |
| Income tax                                  | 34 % on profits                                    |

### **MACHINERY SUPPLIERS**

1. Surjeet Engineering, 72, Vishwakarma Park, Laxmi Nagar, New Delhi 110 092
2. Windsor Machines India Ltd, 2 J, Century Plaza, Teynampet, Chennai – 600 018.
3. Euro pack Machines India Pvt Ltd., 52, Bindal Industrial Estate, Sakinaka, Andheri East, Mumbai – 500 072.
4. Ambica Engineering & Wire Products, L 45, GIDC Estate, Odher, Ahmedabad – 382415,
5. Hind Hydraulics & Engineers, Faridabad, Plot No. 13, Sector 74,



Faridabad – 121005.

6. Prasad Groups & Companies, Plot No. 14 – 16 GIDC Industrial Estate,  
Phase 1 Valva, Ahmedabad – 382445

7. HMT International Ltd, 59, HMT Bhavan, Bellary Road,  
Bangalore – 560032.

### **RAW MATERIAL SUPPLIERS**

1. Prakash Acrylic Pvt Ltd, 70, hatha Muthiappan Street, 1<sup>st</sup> floor,  
Chennai-600001

2. Maharaja Marketing, 57 Elis Road, Maricha Complex,  
Chennai 600 002

3. Madras Industrial Polymers & packings, 648, 1st Floor, MTH Road  
Ambattur, Chennai 600 050

4. Shankar Mercantile Agency Pvt Ltd, Agarwal House  
9&10 Vepey Church Road Vepey Chennai 600 017

5. Marina Enterprises , Mariane Centre. 751 Anna Salai  
Chennai 600 002.

6. Prime Petra Chemicals Ltd B-18 Industrial Estates Guindy  
Chennai 600 032.

## **FINANCIAL ASPECTS**

### **1. COST OF PROJECT**

[Rs.  
lakhs]

|                           |       |
|---------------------------|-------|
| Land & Building (Advance) | 0.50  |
| Plant & Machinery         | 1.50  |
| Other Misc. assets        | 0.50  |
| Pre-Operative expenses    | 0.50  |
| Margin for WC             | 0.66  |
|                           | <hr/> |
|                           | 3.66  |
|                           | <hr/> |

### **2. MEANS OF FINANCE**

|           |       |
|-----------|-------|
| Capital   | 2.53  |
| Term Loan | 1.13  |
|           | <hr/> |
|           | 3.66  |
|           | <hr/> |

### 3. COST OF PRODUCTION & PROFITABILITY STATEMENT

|                               | [Rs.<br>lakhs]     |              |              |              |              |
|-------------------------------|--------------------|--------------|--------------|--------------|--------------|
| Years                         | 1                  | 2            | 3            | 4            | 5            |
| Installed Capacity Gross      | 120000             | 120000       | 120000       | 120000       | 120000       |
| Utilisation                   | 60%                | 70%          | 80%          | 80%          | 80%          |
| Production/Sales Gross        | 72000              | 84000        | 96000        | 96000        | 96000        |
| Selling Price                 | Rs.33.00 per gross |              |              |              |              |
| Sales Value (Rs.lakhs)        | <b>23.76</b>       | <b>27.72</b> | <b>31.68</b> | <b>31.68</b> | <b>31.68</b> |
| Raw Materials                 | 14.72              | 17.17        | 19.63        | 19.63        | 19.63        |
| Packing Materials             | 0.54               | 0.63         | 0.72         | 0.72         | 0.72         |
| Power                         | 0.24               | 0.28         | 0.32         | 0.32         | 0.32         |
| Wages & Salaries              | 4.75               | 4.85         | 4.94         | 5.04         | 5.14         |
| Repairs & Maintenance         | 0.30               | 0.33         | 0.36         | 0.40         | 0.44         |
| Depreciation                  | 0.23               | 0.19         | 0.16         | 0.14         | 0.12         |
| Cost of Production            | 20.78              | 23.45        | 26.13        | 26.25        | 26.37        |
| Selling, Admin, & General exp | 0.72               | 0.76         | 0.80         | 0.84         | 0.88         |
| Interest on Term Loan         | 0.15               | 0.13         | 0.09         | 0.09         | 0.09         |
| Interest on Working Capital   | 0.00               | 0.00         | 0.00         | 0.00         | 0.00         |
| Total                         | 21.65              | 24.34        | 27.02        | 27.18        | 27.34        |

|                         |             |             |             |             |             |
|-------------------------|-------------|-------------|-------------|-------------|-------------|
| Profit Before Tax       | 2.11        | 3.38        | 4.66        | 4.50        | 4.34        |
| Provision for tax       | 0.72        | 1.15        | 1.58        | 1.53        | 1.48        |
| <b>Profit After Tax</b> | <b>1.39</b> | <b>2.23</b> | <b>3.08</b> | <b>2.97</b> | <b>2.86</b> |
| Add: Depreciation       | 0.23        | 0.19        | 0.16        | 0.14        | 0.12        |
| Cash Accruals           | 1.62        | 2.42        | 3.24        | 3.11        | 2.98        |
| Repayment of Term Loan  | 0.00        | 0.28        | 0.28        | 0.28        | 0.29        |

#### 4. WORKING CAPITAL:

|               | Months Consumptions | Values      | %    | Margin Amount | Bank Finance |
|---------------|---------------------|-------------|------|---------------|--------------|
| Raw Materials | 0.50                | 0.61        | 100% | 0.61          | 0.00         |
| Expenses      | 1.00                | 0.05        | 100% | 0.05          | 0.00         |
|               |                     | <u>0.66</u> |      | <u>0.66</u>   | <u>0.00</u>  |

#### 5. PROFITABILITY RATIOS BASED ON 80% UTILISATION

$$\frac{\text{Profit after Tax}}{\text{Sales}} = \frac{3.08}{31.68} = 10\%$$

$$\frac{\text{Profit before Interest and Tax}}{\text{Sales}} = \frac{4.75}{31.68} = 130\%$$

Total Investment 3.66

Profit after Tax = 3.08 122%  
Promoters Capital 2.53

## 6. BREAK EVEN LEVEL

Fixed Cost

(FC):

|                           | [Rs.lakhs] |
|---------------------------|------------|
| Wages & Salaries          | 4.94       |
| Repairs & Maintenance     | 0.36       |
| Depreciation              | 0.16       |
| Admin. & General expenses | 0.80       |
| Interest on TL            | 0.09       |
|                           | <hr/>      |
|                           | 6.36       |
|                           | <hr/>      |

Profit Before Tax (P) 4.66

$$\text{BEL} = \frac{\text{FC} \times 100}{\text{FC} + \text{P}} = \frac{6.36 \times 100}{11.02} = 57.71\%$$

46% of installed capacity

